

REMARKS/ARGUMENTS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-23 are pending in the present application. Claims 1-3, 9, 13-15, 19, 22, and 23 are amended in the present Amendment.

In the outstanding Office Action, the specification was objected to; the claims were objected to; Claim 10 was rejected under 35 U.S.C. § 112, second paragraph; Claims 1-5, 8, 10-23 were rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent Publication No. 2001/0052985 to Ono in view of Applicants' Admitted Art (AA); Claim 6 was rejected under 35 U.S.C. § 103(a) as unpatentable over Ono in view of AA and U.S. Patent No. 6,572,139 to Agachi; Claims 1-4 and 7 were rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent No. 6,678,598 to Hillebrand et al. (herein "Hillebrand"); and Claim 9 was indicated as allowable if rewritten in independent form including all the limitations of the base claim and any intervening claims.

Regarding the objection to the specification, the specification is amended to correct grammatical errors as suggested in the outstanding Office Action. Accordingly, it is respectfully requested the objections to the specification be withdrawn.

Regarding the objections to the claims, Claims 1-3, 9, 13-15, 19, 22, and 23 are amended as suggested in the outstanding Office Action. Accordingly, Applicants respectfully request the objections to the claims be withdrawn.

Further, Applicants respectfully traverse the rejection of Claim 10 under 35 U.S.C. § 112, second paragraph. In particular, Applicants respectfully traverse the assertion in the Office Action that there is insufficient antecedent basis for the limitation "the seat" in Claim 10. However, "the seat" of Claim 10 corresponds to "a seat" in Claim 2, line 21. Accordingly, Applicants respectfully submit that Claim 10 clearly points out and distinctly

claims the subject matter which the Applicants regard as the invention. Thus, it is respectfully requested the rejection under 35 U.S.C. § 112, second paragraph, be withdrawn.

In addition, Applicants respectfully traverse the rejection of Claims 1-5, 8, and 10-23 under 35 U.S.C. § 103(a) as unpatentable over Ono in view of AA, with respect to amended independent Claims 1, 2, 13, and 22.

Claim 1 is directed to a distance detecting apparatus that includes, in part, a light emitting unit that emits a light in a light emitting direction which is the direction to an object, the light having a distributed pattern which is in the form of a line. The distance detecting apparatus also includes a distance deriving unit that derives a distance between the object and the predetermined position based on a position of the distributed pattern of the light in the image obtained by a photographing device. Independent Claims 2, 13 and 22 include similar features.

Thus, an apparatus according to independent Claims 1, 2, 13, and 22 may advantageously enable detection of the distance to an object over a large range by irradiating a light having a distributed pattern which is in the form of a line rather than irradiating a spot beam of light.¹

Applicants respectfully submit that Ono and AA, whether taken individually or in combination, fail to teach or suggest each feature of the claimed inventions. Ono describes using a light beam which has a predetermined intensity distribution on a plane perpendicular to optical axes.² However, Ono does not teach or suggest a light having a pattern that extends in the form of a line, and Ono does not teach or suggest a distance detecting method that is based on a position of a distributed pattern of light which is in the form of a line. Further, Applicants respectfully submit that those features are also not taught or suggested by AA.

¹ Specification at page 10, lines 6-19.

² Ono at column 8, line 66 to column 9, line 2.

Accordingly, Applicants respectfully submit that Ono and AA, whether taken individually or in combination, fail to teach or suggest “a light emitting unit that emits a light ... having a distributed pattern which is in the form of a line” and “a distance deriving unit that derives a distance between the object and a predetermined position based on a position of the distributed pattern of the light in the image,” as recited in Claim 1, and as similarly recited in Claims 2, 13, and 22.

Accordingly, Applicants respectfully submit that Claims 1, 2, 13, and 22, and claims depending therefrom, patentably define over Ono and AA.

Amended Claim 14 is directed to a distance detecting apparatus that includes, in part, a light emitting unit that emits a light in a light emitting direction which is the direction to an object. The light has a plurality of pattern lights which are in the form of a line, and the pattern lights are parallel to each other. Independent Claims 15, 19, and 23 include similar features.

Thus, an apparatus according to independent Claims 14, 15, 19, and 23 may advantageously enable detection of the distance to an object by irradiating a plurality of lights having a distributed pattern which is in the form of a line and which are parallel to each other.³

Applicants respectfully submit that Ono and AA fail to teach or suggest each feature of the claimed inventions. In particular, Applicants respectfully submit Ono fails to teach or suggest a light emitting unit having a plurality of pattern lights which are in the form of a line and which are parallel to each other. Further, AA also fails to teach or suggest that feature.

Accordingly, Applicants respectfully submit that independent Claims 14, 15, 19, and 23, and claims depending therefrom, patentably define over Ono and AA.

³ Specification at page 26, line 28 to page 27, line 8.

Further, Applicants respectfully traverse the rejection of Claims 1-4 and 7 under 35 U.S.C. § 103(a) as unpatentable over Hillebrand, with respect to the amended Claim 1.

Applicants respectfully submit that Hillebrand is silent regarding any light emitting unit that extends a light pattern in the form of a line, and Hillebrand also does not teach or suggest detecting a distance based on a position of a distributed pattern of light having a distributed pattern which is in the form of a line. Accordingly, Applicants respectfully submit that Hillebrand also does not teach or suggest the features of the independent claims as discussed above.

Accordingly Applicants respectfully submit that independent Claim 1 and claims depending therefrom patentably define over Hillebrand.

In addition, Applicants respectfully traverse the rejection of Claim 6 under 35 U.S.C. § 103(a) as unpatentable over Ono in view of AA and Adachi.

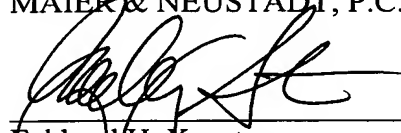
Claim 6 depends from Claim 2, which is believed to patentably define over Ono and AA as discussed above. Further, Applicants respectfully submit that Adachi fails to disclose or suggest the claimed features lacking in the disclosure of Ono and AA. Accordingly, Applicants respectfully request the rejection of Claim 6 be withdrawn.

Accordingly, Applicants respectfully submit that independent Claims 1, 2, 13-15, 19, 22 and 23, and claims depending therefrom, are allowable.

Consequently, in light of the above discussion and in view of the present amendment, the present application is believed to be in condition for allowance and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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